



MANUFACTURING CORPORATION

- Plastics Machining
- Spring Energized Seals
- Rotary Lip Seals

**Material Data Sheet**

Material: PolyShell® - 03

Graphite filled PTFE

Superior wear and heat resistant material. PolyShell-03 is non-abrasive and can be utilized in dry or poorly lubricated environments. Best used in hydraulic fluids and most chemicals.

Physical Properties	Value	Units
Specific Gravity, 73 F	2.19	
<b>Mechanical Properties</b>		
Hardness, Durometer (shore D)	55	
Tensile Strength @ Yield, 73 F	1300-2700	psi
Tensile Elongation @ Break, 73 F	185	%
Coefficient of Friction (dry vs. steel) dynamic	0.08	
Max. Static Bearing Load	400	psi
Max. PV (unlubricated)	1,400	psi x fpm
Compressive Strength 10% Deformation	1,080	psi
Deformation under load	9	%
Izod Impact, Notched Lengthwise		ft-lb/in
<b>Thermal Properties</b>		
CTE, Parallel direction	70	µin/in-°F
CTE, Transverse direction	40	µin/in-°F
Thermal Conductivity	3.1	BTU-in/(hr-ft <sup>2</sup> -°F)
Continuous Service Temperature, Air	550	°F

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\*The values shown in these and the following charts are typical, average properties. Actual values may differ due to variations in resin formulations and processing methods. These values are obtained from sources believed to be reliable, including the resin manufactures, converters and other published sources. However, they should not be used for specification or design purposes.